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FLUORSPAR IN THE THIRD QUARTER 1997

The Defense National Stockpile Center (DNSC) awarded about 45,400 metric tons (50,055 short dry tons) of metallurgical-grade fluorspar to Hastie Mining & Trucking, Cave-In-Rock, IL, and Great Lakes Fluorspar Inc., Cleveland, OH, for an approximate market value of $943,000. This sale completes the authorized disposal of metallurgical-grade fluorspar under the fiscal year 1998 Annual Materials Plan (AMP). Unless the 1998 is revised, there will be no additional metallurgical sales until fiscal year 1999, which begins October 1, 1998 (Defense Logistics Agency, 1997b).

Under the 1998 AMP, the DNSC is also offering for sale about 163,300 tons (180,000 short dry tons) of acid-grade fluorspar, with an initial offering of about 30,900 tons (34,100 short dry tons) stored at Douglas, AZ. Offerings will be made every other month until the authorized sales limit is reached for the current fiscal year (Defense Logistics Agency, 1997a).

In early December, Chinese export companies submitted their bids for 1998 export licenses in the latest round of bids for fluorspar export licenses. The expected average fee per ton of fluorspar is expected to rise to around $25 per ton. The export quota decreased from 1,000,000 tons in 1997 to 850,000 tons in 1998. The increased export license fees plus the lower export quota will likely cause an up turn in fluorspar prices next year. This would be a reversal in the price trend seen over the past four quarters (*see Table 1)*.

In September, Government representatives met in Montreal, Canada, for the latest round of discussions on the phaseout of chemicals that deplete the ozone layer. There were proposals from the European Union and environmental groups to accelerate the phaseout of hydrochlorofluorocarbons (HCFCs), but the representatives decided to keep the current deadline dates of 2020 for developed countries and 2040 in developing countries (Chemical Week, 1997).

The U.S. Environmental Protection Agency (EPA) is considering the possibility of imposing controls on HCFC production and imports. Early next year, EPA plans to publish an advanced notice of proposed rulemaking on the subject. EPA fears that controls may be necessary because U.S. production is nearing the cap set by the Montreal Protocol agreement. Industry disputes this claim, stating that 1996 production was only 82% of the cap, and that 1997 production levels will be even lower (Chemical Market Reporter, 1997).

These decisions could have a direct impact on the introduction of HCFC replacements like HFC-245fa, which was recently tested in a large-scale trial by AlliedSignal Inc. as a foam blowing agent. AlliedSignal reported favorable test results with low toxicity, low global warming potential, and high thermal efficiency. A study by Bayer AG, however, indicated that extensive reformulation is needed to optimize foam blowing systems with new agents such as HFC-245fa (European Chemical News, 1997).

With no change in the 2020 deadline for the phaseout of HCFCs, there will not likely be a rush to replace current blowing agents like HCFC-141b. This scenario could change if EPA finds it necessary to control HCFC production and imports.

A major fluorspar conference was held in Shanghai, China, on October 7-9, 1997. The ***Fluorspar 1997 Conference*** included presentations on Chinese fluorspar deposits, consumption, quality and logistics, and production trends. Presentations were also made on developments in Mexico, Europe, and India, and on HF demand in Asia and North America. There will be another fluorspar conference convened next year. ***International Fluorspar Conference 1998*** will be held on March 18-19 in Vail, CO.

References Cited

Chemical Market Reporter, 1997, EPA mulls possible control measures for HCFC production: Chemical Market Reporter, v. 252, no. 21, p. 21.

Chemical Week, 1997, Accelerated HCFC phaseout is rejected: Chemical Week, v. 159, no. 36, p. 16.

Defense Logistics Agency, 1997a, Amendment no. 11 to solicitation for offers for acid grade fluorspar DLA-MIN-093: Ft. Belvoir, VA, Defense National Stockpile Center, November 24, 10 p.

———1997b, Stockpile accepts metallurgical grade offer: Ft. Belvoir, VA, Defense National Stockpile Center press release, December 9, 1 p.

European Chemical News, 1997, Positive results from trials on HFC-245fa: European Chemical News, v. 68, no. 1785, p. 29.

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TABLE 1
SALIENT FLUORSPAR STATISTICS 1/

(Metric tons unless otherwise specified)

	Third quarter 1996	Fourth quarter 1996	First quarter 1997	Second quarter 1997	Third quarter 1997	Total year to date 1997
Imports for consumption	127,000	88,200	154,000	137,000	94,900	386,000
Value per ton, c.i.f U.S. port, acid grade	$145	$142	$141	$135	$133	$136 2/
Value per ton, c.i.f. U.S. port, metallurgical	$99	$120	$95	$86	$91	$91 2/
Exports	17,500	28,300	12,600	14,200	16,900	43,700
End of quarter stocks: consumer 3/	117,000	99,200	143,000	116,000 r/	124,000	124,000
Fluorspar equivalent of imported hydrofluoric acid 4/	34,600	18,100	32,100	48,800 r/	48,300	129,000
Fluorspar equivalent of imported cryolite	1,750	1,570	2,350	2,030	3,390	7,780
Quarterly reported fluorspar consumption	140,000	131,000	128,000	128,000 r/	119,000	376,000

r/ Revised.

1/ Data are rounded to three significant digits.

2/ Average value for year to date 1997.

3/ Does not include material purchased from the National Defense Stockpile by traders or indirect consumers.

4/ Does not include hydrofluoric acid from foreign trade zone.

TABLE 2
CONSUMPTION OF FLUORSPAR BY END USE AND ASSAY RANGE 1/
(DOMESTIC AND FOREIGN IN THE UNITED STATES)

(Metric tons)

	Second quarter 1997			Third quarter 1997			
End use or product	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	1997 Year to date
Hydrofluoric acid and aluminum fluoride	116,000	--	116,000	108,000	--	108,000	339,000
Basic oxygen furnaces	--	2,230 r/	2,230 r/	--	1,410	1,410	6,410
Electric furnaces	W	5,770	5,770	W	5,410	5,410	16,300
Other uses or products 2/	3,030	1,800	4,830	3,320	1,520	4,840	14,300
Total	119,000	9,800 r/	128,000 r/	111,000	8,330	119,000	376,000
Stocks, end of quarter	103,000	13,100 r/	116,000 r/	110,000	14,200	124,000	124,000

r/ Revised. W Withheld to avoid disclosing company proprietary data.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes acid grade used in electric furnaces, enamel, glass and fiberglass, steel castings, and welding rod coatings.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FLUORSPAR, BY COUNTRY 1/ AND VALUE 2/ 3/

(Metric tons unless otherwise specified)

	Third quarter 1996		Fourth quarter 1996		First quarter 1997		Second quarter 1997		Third quarter 1997		Total year to date	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Containing more than 97% calcium fluoride:												
Austria	175	$58	173	$39	34	$30	47	$32	1	$2	82	$64
China 4/	98,700	14,300	61,800	8,900	103,000	14,600	93,400	12,700	52,500	6,950	249,000	34,300
France	36	19	--	--	18	9	18	9	140	52	176	70
Germany	--	--	--	--	--	--	--	--	31	14	31	14
Mexico	5,810	788	4,180	602	8,830	1,260	1,490	198	1,920	277	12,200	1,730
South Africa	15,900	2,270	20,300	2,710	25,000	3,400	24,900	3,210	32,300	4,220	82,100	10,800
United Kingdom	--	--	--	--	--	--	--	--	106	43	106	43
Total	121,000	17,400	86,500	12,300	137,000	19,300	120,000	16,100	87,000	11,600	344,000	47,000
Containing not more than 97% calcium fluoride:												
Canada	83	28	157	55	97	35	123	52	10	4	230	91
Germany	--	--	194	20	1	6	--	--	264	27	265	33
Mexico	6,010	575	1,390	133	16,500	1,540	17,100	1,430	7,640	688	41,200	3,660
Total	6,090	603	1,740	208	16,600	1,580	17,200	1,480	7,910	719	41,700	3,780

1/ Imports for consumption include imports of immediate entry, and warehouse withdrawals.
2/ C.i.f. at U.S. ports.
3/ Data are rounded to three significant digits; may not add to totals shown.
4/ Data does not agree with published Bureau of the Census data due to adjustments made by the U.S. Geological Survey.

Source: Bureau of the Census.

TABLE 4
IMPORTS FOR CONSUMPTION OF HYDROFLUORIC ACID 1/

(Metric tons unless otherwise specified)

	Third quarter 1996		Fourth quarter 1996		First quarter 1997		Second quarter 1997		Third quarter 1997		Total year to date 1997	
	Quantity	Value 2/ (thousands)	Quantity	Value 2/ (thousands)	Quantity	Value 2/ (thousands)	Quantity	Value 2/ (thousands)	Quantity	Value 2/ (thousands)	Quantity	Value 2/ (thousands)
Canada	39	$99	18	$63	1,870	$2,310	6,930	$8,020	8,190	$9,070	17,000	$19,400
France	107	124	56	64	73	91	111	125	58	63	242	279
Germany	23	73	72	118	38	99	77	146	80	246	195	491
Greece	--	--	--	--	19	20	--	--	--	--	19	20
Japan	138	519	198	710	154	588	253	894	327	1,080	734	2,560
Mexico	22,800	21,300	11,700	11,000	19,300	18,100	25,100	23,500	23,500	22,000	67,800	63,600
United Kingdom	--	--	--	--	--	--	19	23	60	62	79	85
Total	23,100	22,100	12,100	12,000	21,400	21,200	32,500	32,700	32,200	32,500	86,100	86,400

1/ Data are rounded to three significant digits; may not add to totals shown.
2/ C.i.f. at U.S. ports.

Source: Bureau of the Census.